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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,447	03/26/2001	Fumitaka Toyomura	35 .G2756	6745

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EXAMINER

ODA, CHRISTINE K

ART UNIT	PAPER NUMBER
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2858

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/816,447

Applicant(s)
Toyomura

Examiner
Christine K. Oda

Art Unit
2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 9, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above, claim(s) 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-4, 6-11, 13-15 is/are objected to.
- 8) ☒ Claims 5 & 12 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Part III. DETAILED ACTION***Election/Restriction***

1. Applicant's election with traverse of Group I in Paper No. 6 (dated September 9, 2002) is acknowledged. The traversal is on the ground(s) that the groups are related as
5 process and apparatus which includes "means" for practicing the process. Thus the claim is a linking claim and must be examined with the elected invention. This is not found persuasive though Groups II and II recited "means", all the particulars in the subcombination do not appear in the combination, i.e. applying voltage across test terminals. Claims 1-15 will be examined. Claims 16-17 are withdrawn from
10 consideration
2. The requirement is still deemed proper and is therefore made FINAL.

Informalities

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. §103(a), the examiner presumes that the subject matter of the
15 various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. §1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. §103(c) and potential 35 U.S.C. §102(f) or (g)
20 prior art under 35 U.S.C. §103(a).

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. §119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 U.S.C. §103

- 25 The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 6-9 13-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Watanabe (JP 07-235685).

5 A. With respect to Claims 1, 7, 8, and 14 Watanabe teaches the claimed method for testing a solar panel by performing a withstand voltage test (Abstract, [0011]) between an electrical section and conductor section of the outer housing, and applying voltage (Abstract, [0014-0015], [0029-0030]). Watanabe teaches that the test is performed between the panel and the ground ([0004]). One of
10 ordinary skill in the art would realize the advantage and desirability of using a conductor section of the housing instead of ground in order to avoid sparks and damage to the solar panel being tested. Watanabe lacks stating an outer housing. One of ordinary skill in the art would realize the advantage and desirability of having a housing so that the parts would be conveniently placed and protected.

15 B. With respect to Claims 2 and 9, Watanabe teaches AC current ([0020]).

C. With respect to Claims 6 and 13, Watanabe teaches the claimed live power line, considered to be the link with the power supply (Fig. 7, #4) and the power conditioner (Fig. 7, #3).

20 D. With respect to Claim 15, Watanabe teaches the claimed method as stated in paragraphs 5A above. Watanabe lacks encapsulating the solar cell with a protective covering member. One of ordinary skill in the art would realize the advantage and desirability of to protect the cell in order to avoid damage to delicate parts.

25 6. Claims 1, 7, 8, 14 and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ito (JP 11-274522).

A. With respect to Claims 1, 7, 8, and 14 Ito teaches the claimed method for testing a solar panel by performing an insulation resistance test (Abstract, [0014-0015], [0029]) between an electrical section and conductor section of the outer housing, referred to as a modular frame ([0015]). Ito lacks specifically stating
30 that voltage is applied. One of ordinary skill in the art would realize the

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advantage and desirability of using voltage since it is connected to an output terminal and an internal open circuit of the solar cell is being monitored. If voltage was not used, the open circuit would not otherwise be monitored.

5 B. With respect to Claim 15, Ito teaches the claimed method as stated in paragraphs 6A above. Ito lacks encapsulating the solar cell with a protective covering member. One of ordinary skill in the art would realize the advantage and desirability of to protect the cell in order to avoid damage to delicate parts.

7. Claims 1, 2, 6-9, and 13-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tamechika (5,712,572).

10 A. With respect to Claims 1, 7, 8, and 14 Tamechika teaches the claimed method for testing a solar panel by performing a insulation resistance test (Abstract) between an electrical section and conductor section of the outer housing, and applying voltage (Abstract). Tamechika teaches that the test is performed between the panel and the ground (Figs. 1-5). One of ordinary skill in
15 the art would realize the advantage and desirability of using a conductor section of the housing instead of ground in order to avoid sparks and damage to the solar panel being tested. Watanabe lacks stating an outer housing. One of ordinary skill in the art would realize the advantage and desirability of having a housing so that the parts would be conveniently placed and protected.

20 B. With respect to Claims 2 and 9, Tamechika teaches AC current (Col. 3, lines 47-48).

C. With respect to Claims 6 and 13, Tamechika teaches the claimed live power line, considered to be the distribution line (Figs. 1-5).

25 D. With respect to Claim 15, Tamechika teaches the claimed method as stated in paragraphs 7A above. Tamechika lacks encapsulating the solar cell with a protective covering member. One of ordinary skill in the art would realize the advantage and desirability of to protect the cell in order to avoid damage to delicate parts.

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8. Claims 1, 2-4, 7-11, 14, and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yamagishi (6,300,556) in view of Watanabe (JP 07-235685).

5 A. With respect to Claims 1, 7, 8, and 14 Yamagishi teaches the claimed method for testing a solar panel by performing a withstand voltage test between an electrical section and conductor section of the outer housing, referred to as a frame (Col. 1, lines 23-25). Yamagishi lacks stating how the test is performed, but states that short-circuit current, open-circuit voltage and resistance was measured. Watanabe teaches that it is well known to apply voltage (Abstract, [0014-0015], [0029-0030]). One of ordinary skill in the art would realize the advantage and
10 desirability of using voltage, or voltage, current and resistance would not be measured.

B. With respect to Claims 2 and 9, Yamagishi lacks AC current. Watanabe teaches AC current ([0020]). One of ordinary skill in the art would realize the advantage and desirability of using AC current since the measurement would not
15 otherwise be carried out.

C. With respect to Claims 3 and 10, Yamagishi teaches a bottom reinforcement member for reinforcing the bottom surface of the solar panel, referred to as a protective film (#8).

20 D. With respect to Claims 4 and 11, Yamagishi teaches the claimed metal plate, referred to as a tin oxide film (#2).

E. With respect to Claim 15, Yamagishi teaches the claimed method as stated in paragraphs 5A above, and further teaches encapsulating the solar cell with a protective covering member, considered to be the glass substrate (Col. 3, lines 21-22).

25 9. Claims 5 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References cited but not applied against the claims are considered to be of interest and should be carefully considered by the applicant.

- 5 Kurokami (US 2001/0048605) teaches detecting a ground fault of a solar batter using AC current by measuring insulation resistance.

Contact Information

- 10 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine K. Oda whose telephone number is (703) 305-3857. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le, can be reached on (703) 308-0750.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.

- 15 A Technology Center fax for FILING Technology Center 2800 PAPERS ONLY is available at (703) 308-7722 or (703) 308-7724.

CKO: cko
1 December 2002

20

Christine K. Oda
Christine K. Oda
Primary Examiner
Art Unit 2858